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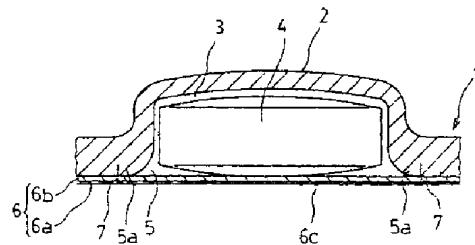
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[54] 发明名称 包装体

[57] 摘要

本发明提供一种包装体，用合成树脂材料形成的层叠薄膜对多个各自鼓起部的内侧凹部放入了被收纳物的、由合成树脂材料形成的薄片状成形体的背面凹部的开口部实施封闭，使消费者可以容易地进行分类排出处理。为此，本发明在薄片状成形体上设置通过热成形而形成的、向表面侧突出的多个鼓起部，在多个各自鼓起部的内侧的凹部放入被容纳物的状态下，用合成树脂材料形成的层叠薄膜封闭薄片状成形体背面的凹部开口部，上述层叠薄膜以较小的接合力可剥离地与薄片状成形体相接合，在前述每个凹部的开口部的周围位置，以从层叠薄膜的背面一侧沿壁厚方向贯通层叠薄膜、而不沿壁厚方向贯通薄片状成形体的方式形成刻痕。



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权利要求书

1. 一种包装体，其特征在于，在薄片状成形体上设置通过热成形而形成的向表面侧突出的多个鼓起部，在多个各自鼓起部的内侧的凹部放入被容纳物的状态下，用合成树脂材料形成的层叠薄膜封闭薄片状成形体背面的凹部开口部，上述层叠薄膜以较小的接合力可剥离地与薄片状成形体相接合，在前述每个凹部的开口部的周围位置，以从层叠薄膜的背面一侧沿壁厚方向贯通层叠薄膜、而不沿壁厚方向贯通薄片状成形体的方式形成刻痕。
2. 如权利要求1所述的包装体，其特征在于，层叠薄膜和薄片状成形体的接合力为热封强度 $1.0\text{N/cm} \sim 13.0\text{N/cm}$ 。
3. 如权利要求1所述的包装体，其特征在于，刻痕的形状是圆形。
4. 如权利要求1所述的包装体，其特征在于，刻痕的形状是U字形。
5. 如权利要求1所述的包装体，其特征在于，刻痕的形状是外周的一部分不连续的圆形。

说 明 书

包装体

技术领域

本发明涉及用来包装例如药片、颗粒状点心（例如柠檬汁饮料（ラムネ）和巧克力等）等的包装体。

背景技术

已知现有的用来包装例如药片的包装体，一般是由透明的合成树脂材料形成的、并通过热成形在表面形成多个鼓起部的薄片状成形体，在前述多个各自鼓起部的内侧凹部放入药片，在此状态下，为了封闭薄片状成形体背面的凹部的开口部，而把整个薄片状成形体背面都贴上铝薄膜。

而且，从现有的装有药片的包装体取出药片时，用手指将其中一个鼓起部分向相反方向推，使得封闭鼓起部内侧凹部开口处的铝薄膜被推力破坏、使凹部开口，这样就可以从开口处取出药片。

现在使用的这种铝薄膜，是通过推力来破坏使凹部开口，取出全部药片后的薄片状成形体的背面至少在凹部以外的部分残留铝薄膜，消费者在进行分类排出处理的时候，存在难以区分构成薄片状成形体的合成树脂材料和背面的铝薄膜的问题。

发明内容

本发明的目的就是要解决这样的课题，在合成树脂材料形成的薄片状成形体的背面不使用铝薄膜、而使用合成树脂材料形成的薄膜，这样消费者就能够容易地进行分类排出处理。

为了达到所述目的，本发明的要旨如下。

1. 一种包装体，其特征在于，在薄片状成形体上设置通过热成形而形成的向表面侧突出的多个鼓起部，在多个各自鼓起部的内侧的凹部放入被容纳物的状态下，用合成树脂材料形成的层叠薄膜封闭薄片状成形体背面的凹部开口部，上述层叠薄膜以较小的接合力可剥离地

与薄片状成形体相接合，在前述每个凹部的开口部的周围位置，以从层叠薄膜的背面一侧沿壁厚方向贯通层叠薄膜、而不沿壁厚方向贯通薄片状成形体的方式形成刻痕。

2. 如第一项所述的包装体，其特征在于，层叠薄膜和薄片状成形体的接合力为热封强度 $1.0\text{N/cm} - 13.0\text{N/cm}$ 。

3. 如第一项所述的包装体，其特征在于，刻痕的形状是圆形。

4. 如第一项所述的包装体，其特征在于，刻痕的形状是 U 字形。

5. 如第一项所述的包装体，其特征在于，刻痕的形状是外周的一部分不连续的圆形。

根据这种构造，通过用手指推薄片状成形体的表面一侧的鼓起部，把凹部内侧的被收纳物推向由前述刻痕围成的层叠薄膜部分，所述的力将刻痕围成的层叠薄膜部分的外围与薄片状成形体的开口部外围附近部分的接合部剥离开，这样就可以把开口部打开，取出被收纳物。通过这种方式，本发明在薄片状成形体的背面接合的薄膜不是铝薄膜、而是用合成树脂材料形成的层叠薄膜，所以消费者就可以容易地进行分类排出处理。

附图说明

图 1 是本发明第一实施例的包装体的透视图。

图 2 是包装体主要部分的放大剖面图。

图 3 是包装体主要部分的背面放大图

图 4 是显示从包装体中取出药片的状态的主要部分的放大剖面图。

图 5 是本发明第 2 实施例的包装体主要部分的放大剖面图。

图 6 是显示从包装体中取出药片的状态的主要部分的放大剖面图。

图 7a 和 b 是显示在层叠薄膜上形成的刻痕的变型例的说明图。

具体实施方式

图 1 ~ 图 4 表示本发明的第 1 实施例。

图 1 ~ 图 4 中，1 是以透明的合成树脂材料例如聚丙烯为材料制成的薄片状成形体，通过热成形在表面一侧形成厚度为 $90\mu\text{m}$ 的多个鼓起部 2、而在鼓起部 2 以外的平坦部的厚度为 $200\mu\text{m}$ 。所述薄片状成形体

1，是在上述多个各自鼓起部2的内侧凹部3中放入外围呈圆形的药片4的状态下，在薄片状成形体1的整个背面热封安装合成树脂的层叠薄膜6，使其封闭薄片状成形体1的背面的凹部3的开口部5。前述层叠薄膜6由：厚度为 $12\mu\text{m}$ 的透明蒸镀聚对苯二甲酸乙二醇酯薄膜层6a；通过干燥分层膜（ドライラミネート）以剥离强度大于 2.0N/cm 的较大接合力接合在所述薄膜层6a上的、厚度为 $30\mu\text{m}$ 的透明的乙烯醋酸乙烯酯共聚物树脂和链烯烃树脂的混合材料形成的薄膜层6b构成。而且，层叠薄膜6以所述薄膜层6b朝向上述薄片状成形体1的背面的方式和薄片状成形体1重叠，并以可以进行界面剥离的方式进行了热封安装。具体地，薄膜层6b和薄片状成形体1以热封强度为 $1.0\text{N/cm} \sim 13.0\text{N/cm}$ 的较小的接合力接合。且，在层叠薄膜6上设置透明蒸镀聚对苯二甲酸乙二醇酯薄膜层6a，是为了获得防止湿气浸入凹部3的内部的效果、和气体阻隔（ガスバリヤー）的效果。因为薄片状成形体1是用聚丙烯为材料作成的厚度较大，所以可以发挥防止湿气向凹部3的内部浸入的效果。而且，在所述薄片状成形体1需要气体阻隔（ガスバリヤー）性的情况下，最好设置具有气体阻隔（ガスバリヤー）效果的材料形成的薄膜层。

如上所述的在薄片状成形体1上接合层叠薄膜6的状态，在各开口部5的周围位置，以从层叠薄膜6的里面沿壁厚方向贯通层叠薄膜6、而不沿壁厚方向贯通薄片状成形体1的方式形成圆形刻痕7。虽然在层叠薄膜6上形成了这样的刻痕7，但是由所述刻痕7包围的层叠薄膜部分6c的薄膜层6b的外围被接合在薄片状成形体1的开口部5的外围附近部分5a上，所以，只要不向由刻痕7围成的层叠薄膜部分6c施加挤压等的外力，由刻痕7围成的层叠薄膜部分6c就会保持封闭薄片状成形体1的开口部5的状态而不被破坏。

从上述结构的包装体的凹部3中取出药片4时，通过用手指挤压薄片状成形体1的表面的鼓起部2、并将凹部3内部的药片4推压到由前述刻痕7围成的层叠薄膜部分6c一侧，在所述力的作用下，刻痕7围成的层叠薄膜部分6c的外围与薄片状成形体1的开口部5的外围

附近部分 5a 的接合部剥离，其结果是可以打开开口部 5 并从凹部 3 取出药片 4。

图 5~图 6 表示本发明的第 2 实施例。

图 5~图 6 中，11 是以透明的合成树脂材料例如聚丙烯为材料制成的薄片状成形体，通过热成形在表面一侧形成厚度为 $90\mu\text{m}$ 的多个鼓起部 12、而在鼓起部 12 以外的平坦部的厚度为 $200\mu\text{m}$ 。所述薄片状成形体 11，是在上述多个各自鼓起部 12 的内侧凹部 13 中放入外围呈圆形的药片 14 的状态下，在薄片状成形体 11 的整个背面热封安装合成树脂的层叠薄膜 16，使其封闭薄片状成形体 11 的背面的凹部 13 的开口部 15。前述层叠薄膜 16 由：厚度为 $12\mu\text{m}$ 的透明蒸镀聚对苯二甲酸乙二醇酯薄膜层 16a；通过干燥分层膜（ドライラミネート）接合在所述薄膜层 16a 上、厚度为 $30\mu\text{m}$ 的聚乙烯薄膜层 16b；和通过共同挤压在所述薄膜层 16b 上并通过分层膜接合的厚度为 $30\mu\text{m}$ 的透明的乙烯醋酸乙烯酯共聚物树脂与链烯烃树脂的混合材料形成的薄膜层 16c 构成。而且，通过将所述薄膜层 16c 安装在薄片状成形体 11 的整个背面，封闭预先放入了药片 14 的薄片状成形体 11 背面的凹部 13 的开口部 15。在前述薄膜层 16a 和薄膜层 16b 之间以及在薄膜层 16b 与薄膜层 16c 之间、分别以剥离强度大于 $2.0\text{N}/\text{cm}$ 的较大接合力接合，与之相对应地，前述薄膜层 16c 对于薄片状成形体 11 以热封强度为 $1.0\text{N}/\text{cm} \sim 13.0\text{N}/\text{cm}$ 的较小的接合力、以可以进行界面剥离的方式通过热封而接合。

如上所述的在薄片状成形体 11 上接合层叠薄膜 16 的状态，在各开口部 15 的周围位置，以从层叠薄膜 16 的里面沿壁厚方向贯通层叠薄膜 16、而不沿壁厚方向贯通薄片状成形体 11 的方式形成圆形刻痕 17。虽然在层叠薄膜 16 上形成了这样的刻痕 17，但是由所述刻痕 17 包围的层叠薄膜部分 16d 外围，具体地，由刻痕 17 包围的薄膜层 16c 的外围被接合在薄片状成形体 11 的开口部 15 的外围附近部分 15a 上，所以，只要不向由刻痕 17 围成的层叠薄膜部分 16d 施加挤压等的外力，由刻痕 17 围成的层叠薄膜部分 16d 就会保持封闭薄片状成形体 11 的

开口部 15 的状态而不被破坏。

从上述结构的包装体的凹部 13 中取出药片 14 时，通过用手指挤压薄片状成形体 11 的表面的鼓起部 12、并将凹部 13 内部的药片 14 推压到由前述刻痕 17 围成的层叠薄膜部分 16d 一侧，在所述力的作用下，刻痕 17 围成的层叠薄膜部分 16d 的薄膜层 16c 的外围与薄片状成形体 11 的开口部 15 的外围附近部分 15a 的接合部剥离，其结果是可以打开开口部 15 并从凹部 13 取出药片 14。

上述两个实施例中，刻痕 7 及刻痕 17 的形状是圆形的，但也可以是图 7a 所示的 U 字形及图 7b 所示的外围的一部分是不连续的圆形。并且，上述药片也有不是圆形的，这种情况下只要与药片的形状相对应地决定前述刻痕的形状就可以。并且作为收纳在包装体内的物品，除了上述的药片以外，也可以是柠檬汁饮料和巧克力等的颗粒状点心。

另外，上述薄片状成形体 1、11 和层叠薄膜 6、16 的接合是以可以进行界面剥离的方式、通过热封来进行的，但也可以是通过可进行粘结部剥离或者可进行层间剥离的方式进行接合，这种情况，只要适当选择薄片状成形体 1、11，和与所述薄片状成形体 1、11 相重叠的层叠薄膜 6、16 的薄膜层的材料就可以。

进一步，也可以将纸制的薄片呈三明治状地夹在上述层叠薄膜 6、16 中。

说 明 书 附 图

图 1

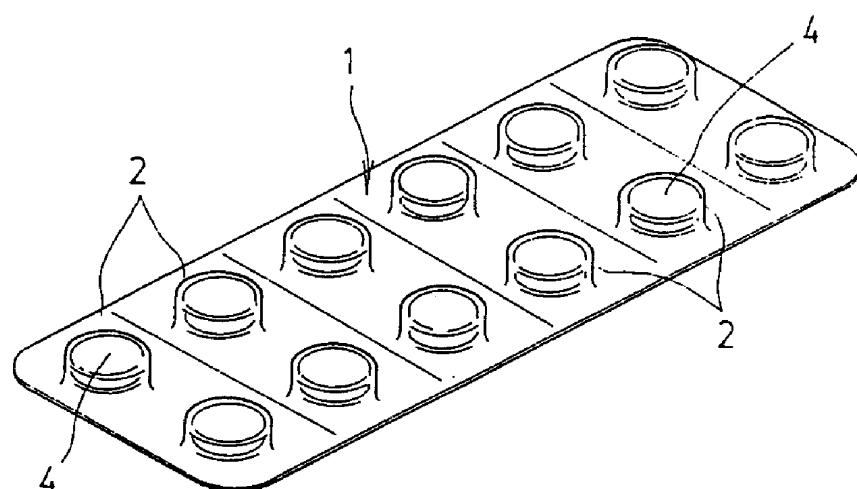


图 2

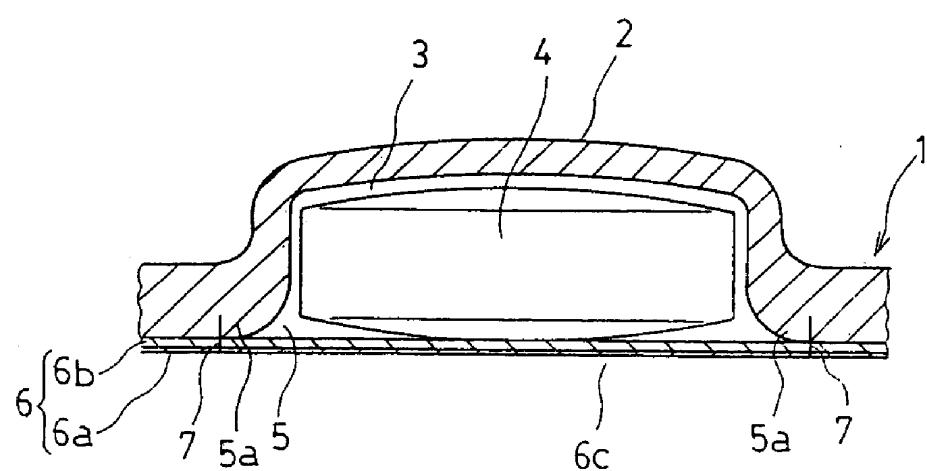
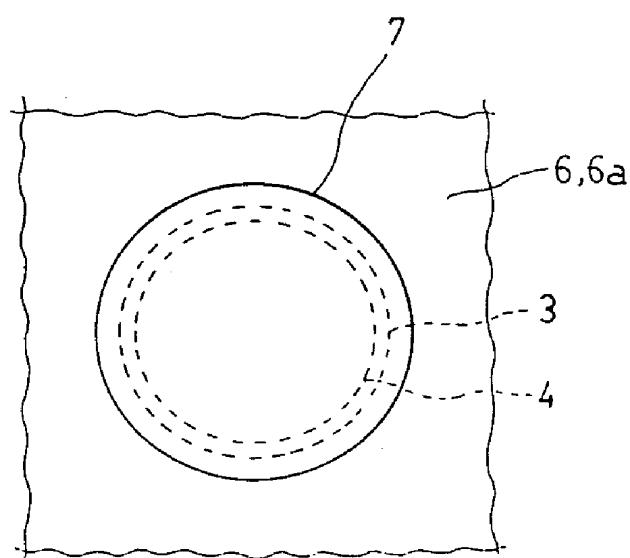


图 3



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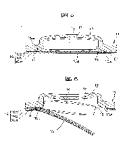


图 7a

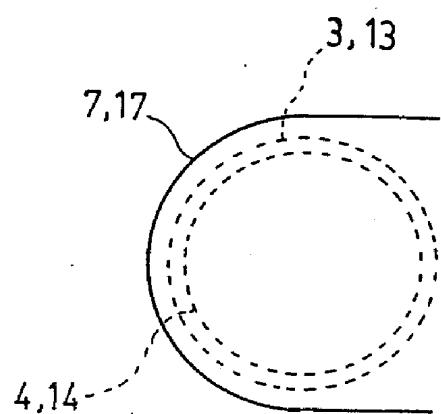
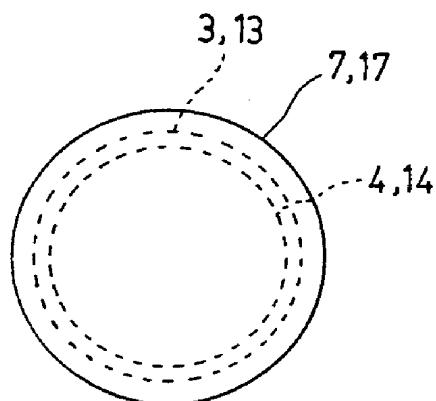


图 7b



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Blister pack for packaging medical tablets and granular confectionery e.g., chocolate, has thermoformed sheet-like body with protrusions, and laminated film made from synthetic resinous material

Patent Assignee: DAIWA COLOR GRAVURE CO LTD; DAIWA GRAVURE CO LTD; DAIWA GRAVURE KK

Inventors: SHIBATA Y; SHIBATA S

Patent Family (10 patents, 29 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1227045	A1	20020731	EP 20022192	A	20020129	200262	B
US 20020109709	A1	20020801	US 200257174	A	20020125	200262	E
JP 2002225930	A	20020814	JP 200120859	A	20010130	200268	E
CN 1369415	A	20020918	CN 2002103214	A	20020129	200303	E
US 6776285	B2	20040817	US 200257174	A	20020125	200454	E
EP 1227045	B1	20050511	EP 20022192	A	20020129	200536	E
DE 60204063	E	20050616	DE 60204063	A	20020129	200540	E
			EP 20022192	A	20020129		
DE 60204063	T2	20051006	DE 60204063	A	20020129	200566	E
			EP 20022192	A	20020129		
JP 3935677	B2	20070627	JP 200120859	A	20010130	200742	E
CN 100408443	C	20080806	CN 2002103214	A	20020129	200878	E

Priority Application Number (Number Kind Date): JP 200120859 A 20010130; EP 20022192 A 20020129

Patent Details

Patent Number	Kind	Language	Pages	Drawings	Filing Notes
EP 1227045	A1	EN	11	7	
Regional Designated States,Original		AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR			
JP 2002225930	A	JA	5		
EP 1227045	B1	EN			
Regional Designated States,Original		CH DE FR GB LI			
DE 60204063	E	DE			Application EP 20022192 Based on OPI patent EP 1227045
DE 60204063	T2	DE			Application EP 20022192 Based on OPI patent EP 1227045
JP 3935677	B2	JA	7		Previously issued patent JP 2002225930

Alerting Abstract: EP A1

NOVELTY - A blister pack comprises a thermoformed sheet-like body having protrusions extruded from a surface of the body; and a laminated film made from a synthetic resinous material. The laminated film closes

openings of recesses on a reverse face of the sheet-like thermoformed body after to-be-packaged matters have been placed in the recesses.

DESCRIPTION - A blister pack comprises a thermoformed sheet-like body (1) having protrusions extruded from a surface of the body; and a laminated film made from a synthetic resinous material. The laminated film (6) closes openings of recesses on a reverse face of the sheet-like thermoformed body after to-be-packaged matters (4) have been placed in the recesses. Each recess (3) forms an interior of each protrusion (2). The laminated film is bonded to the thermoformed body with a small bonding strength to be capable of peeling. A cut (7) is formed in a position surrounding the opening (5) of each recess. It penetrates the laminated film from the reverse face of the thermoformed body in a thickness direction but does not penetrate the thermoformed body in the thickness direction.

USE - For packaging e.g., medical tablets and granular confectionery (e.g., lemon pop powder and chocolate).

ADVANTAGE - The invention facilitates separate waste disposal of the blister pack by consumers. The consumers can easily carry out separate waste disposal because an aluminum foil is not used but the laminated film is made from the synthetic resinous material for the reverse face of the sheet-like thermoformed body.

DESCRIPTION OF DRAWINGS - The figure is an enlarged cross-sectional view of the blister pack.

1 Thermoformed sheet-like body

2 Protrusion

3 Recess

4 To-be-packaged matters

5 Opening

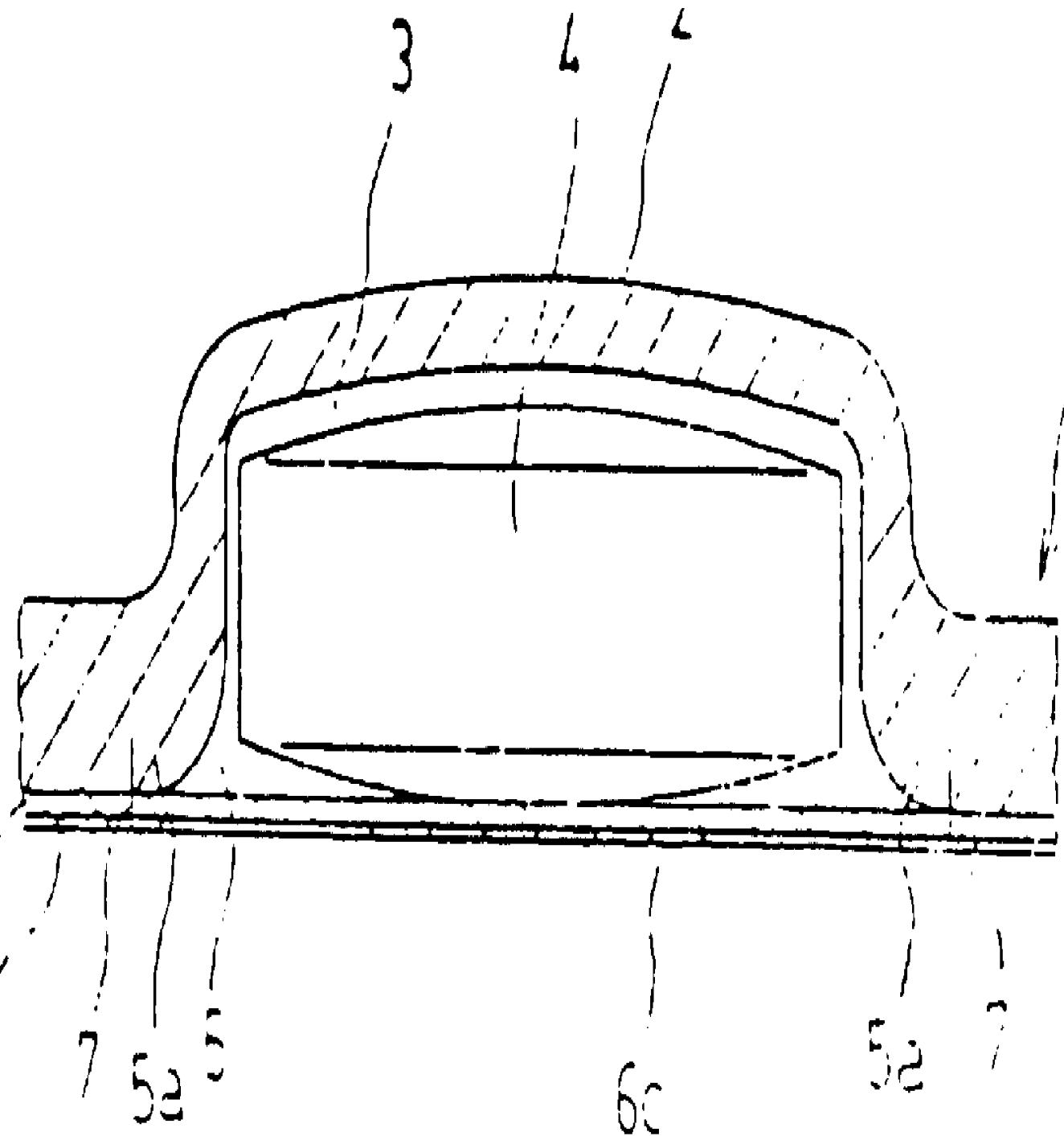
6 Laminated film

7 Cut

Technology Focus:

INSTRUMENTATION AND TESTING - Preferred Properties: The bonding strength of the laminated film to the sheet-like thermoformed body is 1-13 N/cm in heat-sealing strength. The cut is of a circular shape having a partly discontinuous periphery, or a U shape.

Main Drawing Sheet(s) or Clipped Structure(s)



International Classification (Main): B65D-075/34, B65D-083/04

International Patent Classification

IPC	Level	Value	Position	Status	Version
A61J-0001/03	A	I	L	R	20060101
A61J-0001/03	A	I	L	B	20060101
B65D-0075/34	A	I		R	20060101
B65D-0075/34	A	I	F	B	20060101
B65D-0075/36	A	I	F		20060101
B65D-0083/04	A	I	F	R	20060101
A61J-0001/00	C	I	L	R	20060101

A61J-0001/00	C	I	L	B	20060101
B65D-0075/28	C	I		R	20060101
B65D-0075/28	C	I	F	B	20060101
B65D-0075/28	C	I			20060101
B65D-0083/04	C	I	F	R	20060101

US Classification, Issued: 206-469000

US Classification, Issued: 206-531000

US Classification, Issued: 206469, 206531, 206469

Original Publication Data by Authority

China

Publication Number: CN 100408443 C (Update 200878 E)

Publication Date: 20080806

Assignee: DAIWA COLOR GRAVURE CO LTD; JP (DAIW-N)

Inventor: SHIBATA S

Language: ZH

Application: CN 2002103214 A 20020129 (Local application)

Priority: JP 200120859 A 20010130

Original IPC: B65D-75/28(I,M,98,20060101,C) B65D-75/36(I,CN,20060101,A,F)

Current IPC: B65D-75/28(A,I,M,98,20060101,C) B65D-75/36(I,CN,20060101,A,F)

Current ECLA class: B65D-75/32D3|CN 1369415 A (Update 200303 E)

Publication Date: 20020918

Assignee: DAIWA COLOR GRAVURE CO LTD; JP (DAIW-N)

Language: ZH

Application: CN 2002103214 A 20020129 (Local application)

Priority: JP 200120859 A 20010130

Original IPC: B65D-75/36(A)

Current IPC: A61J-1/00(R,A,I,M,JP,20060101,20051220,C,L) A61J-1/03(R,I,M,JP,20060101,20051220,A,L) B65D-75/28(R,I,M,EP,20060101,20051008,C) B65D-75/34(R,I,M,EP,20060101,20051008,A) B65D-83/04(R,I,M,JP,20060101,20051220,A,F) B65D-83/04(R,I,M,JP,20060101,20051220,C,F)

Current ECLA class: B65D-75/32D3

Germany

Publication Number: DE 60204063 E (Update 200540 E)

Publication Date: 20050616

Blisterverpackung

Assignee: DAIWA GRAVURE CO LTD; JP (DAIW-N)

Language: DE

Application: DE 60204063 A 20020129 (Local application) EP 20022192 A 20020129 (Application)

Priority: JP 200120859 A 20010130

Related Publication: EP 1227045 A (Based on OPI patent)

Original IPC: B65D-75/34(A) B65D-75/34(A)

Current IPC: B65D-75/34(A) B65D-75/34(A)|DE 60204063 T2 (Update 200566 E)

Publication Date: 20051006

Language: DE

Application: DE 60204063 A 20020129 (Local application) EP 20022192 A 20020129 (Application)

Priority: JP 200120859 A 20010130

Related Publication: EP 1227045 A (Based on OPI patent)

Original IPC: B65D-75/34(A)

Current IPC: A61J-1/00(R,I,M,JP,20060101,20051220,C,L) A61J-1/03(R,I,M,JP,20060101,20051220,A,L) B65D-75/28(R,I,M,EP,20060101,20051008,C) B65D-75/34(R,I,M,EP,20060101,20051008,A) B65D-83/04(R,I,M,JP,20060101,20051220,A,F) B65D-83/04(R,I,M,JP,20060101,20051220,C,F)

Current ECLA class: B65D-75/32D3

European Patent Office

Publication Number: EP 1227045 A1 (Update 200262 B)

Publication Date: 20020731

Blisterverpackung Blister pack Emballage du type blister

Assignee: Daiwa Gravure Co., Ltd., 7-23, Kinjo 1-chome, Kita-ku, Nagoya-shi, Aichi 462-0847, JP (DAIW-N)

Inventor: Shibata, Yukihiko, Daiwa Gravure Co., Ltd., 7-23, Kinjoh 1-chome, Kita-ku, Nagoya-shi, Aichi 462-0847, JP

Agent: Grunecker, Kinkelday, Stockmair Schwanhauser, Anwaltssozietat, Maximilianstrasse 58, 80538 Munchen, DE

Language: EN (11 pages, 7 drawings)

Application: EP 20022192 A 20020129 (Local application)

Priority: JP 200120859 A 20010130

Designated States: (Regional Original) AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Original IPC: B65D-75/34(A)

Current IPC: A61J-1/00(R,I,M,JP,20060101,20051220,C,L) A61J-1/03(R,I,M,JP,20060101,20051220,A,L) B65D-75/28(R,I,M,EP,20060101,20051008,C) B65D-75/34(R,I,M,EP,20060101,20051008,A) B65D-83/04(R,I, M,JP,20060101,20051220,A,F) B65D-83/04(R,I,M,JP,20060101,20051220,C,F)

Current ECLA class: B65D-75/32D3

Original Abstract: An object of the present invention is to facilitate separate waste disposal of blister packs by consumers. To achieve this object, a blister pack has been provided, which comprises a sheet-like thermoformed body (1) having a number of protrusions (2) extruded from a surface of the body; and a laminated film (6) made from a synthetic resinous material, which closes openings of recesses (3) on a reverse face of the thermoformed body (1) after to-be-packaged matters (4) have been placed in the recesses (3), each recess (3) forming an interior of each protrusion (2), wherein the laminated film (6) is bonded to the thermoformed body (1) with a small bonding strength to be capable of peeling, and a cut (7) is formed in a position surrounding the opening of each recess (3) such that the cut (7) penetrates the laminated film (6) in its thickness direction from its reverse face but does not penetrate the body (1) in its thickness direction.

Claim: 1. A blister pack comprising: * a thermoformed sheet-like body having a number of protrusions extruded from a surface of the body; and * a laminated film made from a synthetic resinous material, which close s openings of recesses on a reverse face of the sheet-like thermoform ed body after to-be-packaged matters have been placed in the recesses , each recess forming an interior of each protrusion, wherein the laminated film is bonded to the sheet-like thermoformed body with a s mall bonding strength to be capable of peeling, and a cut is formed i n a position surrounding the opening of each recess such that the cut penetrates the laminated film from a reverse face thereof in a thick ness direction thereof but does not penetrate the sheet-like thermofo rmed body in the thickness direction thereof.JEP 1227045 B1 (Update 2 00536 E)

Publication Date: 20050511

Blisterverpackung Blister pack Emballage du type blister

Assignee: Daiwa Gravure Co., Ltd., 7-23, Kinjo 1-chome, Kita-ku, Nagoya-shi, Aichi 462-0847, JP

Inventor: Shibata, Yukihiko, Daiwa Gravure Co., Ltd., 7-23, Kinjoh 1-chome, Kita-ku , Nagoya-shi, Aichi 462-0847, JP

Agent: Grunecker, Kinkelday, Stockma ir Schwanhauser, Anwaltssozietat, Maximilianstrasse 58, 80538 Munch en, DE

Language: EN

Application: EP 20022192 A 20020129 (Local applic ation)

Designated States: (Regional Original) CH DE FR GB LI

Original IPC: B65D-75/34(A)

Current IPC: A61J-1/00(R,I,M,JP,20060101,20051220 ,C,L) A61J-1/03(R,I,M,JP,20060101,20051220,A,L) B65D-75/28(R,I,M,EP,2 0060101,20051008,C) B65D-75/34(R,I,M,EP,20060101,20051008,A) B65D-83/ 04(R,I,M,JP,20060101,20051220,A,F) B65D-83/04(R,I,M,JP,20060101,20051220,C,F)

Current ECLA class: B65D-75/32D3

Claim: 1. Blisterpackung, die umfasst: * einen warmgeformten plattenartigen Korper (1,11) mit einer Anzahl v on Vorsprungen (2,12), die aus einer Oberflache des Körpers extrudie rt sind; und * einen laminierten Film (6, 16), der aus einem Kunstarzmaterial besteht und Offnungen (5,15) von Vertiefungen (3,13) an einer Rückseite des plattenartigen warmgeformten Körpers (1,11) verschließt, nachd em zu verpackende Substanzen in die Vertiefungen (3,13) eingelegt werden, wobei jede Vertiefung (3,13) eine Innenseite jedes Vorsprungs (2,12) zum Aufnehmen der zu verpackenden Substanzen bildet, **d adurch gekennzeichnet, dass** der laminierte Film (6,16), der die Of fnungen (5,15) verschliesst, eine Polyethylenterephthalat-Schicht (6 a,16a) und eine Filmschicht (6b,16c) umfasst, die aus einem gemisch ten Material besteht, das aus einem Ethylen/Vinylacetat-Copolymerharz und einem Olefinharz zusammengesetzt ist, und auf die Polyethylenterephthalat-Schicht (6a) laminiert ist, wobei der laminierte Film (6,16) so auf den warmgeformten plattenartigen Körper (1,11) geschichte t wird, dass die Filmschicht, die aus dem gemischten Material besteht, der Rückseite des warmgeformten plattenartigen Körpers (1,11) zug ewandt ist, und mit dem plattenartigen warmgeformten Körper mit einer r geringen Bindungsfestigkeit verklebt ist, so dass Abziehen möglich ist, und ein Einschnitt (7,17) an einer Position um die Offnung (5,15) jeder Vertiefung (3,13) herum so ausgebildet ist, dass der Einschnitt (7,17) in den laminierten Film (6,16) von einer Fläche des minierten Films (6,16) gegenüber dem plattenartigen warmgeformten K orper (1, 11) in einer Dickenrichtung derselben eindringt, jedoch in den plattenartigen warmgeformten Körper (1,11) in der Dickenrichtung d esselben nicht eindringt. 1.A blister pack comprising: * a thermoformed sheet-like body (1,11) having a number of protrusions (2,12) extruded from a surface of the body; and * a laminated film (6,16) made from a synthetic resinous material, whic h closes openings (5,15) of recesses (3,13) on a reverse face of the sheet-like thermoformed body (1,11) after to-be-packaged matters have been placed in the recesses (3,13), each recess (3,13) forming an in terior of each protrusion (2,12) for receiving the matter to be packa ged, **characterised in that** said laminated film (6,16) which close s the openings (5,15) comprises a polyethylene terephthalate layer (6 a,16a), and a film layer (6b,16c) composed of a blend material consis ting of an ethylene/vinyl acetate copolymer resin and an olefin resin and laminated to said polyethylene terephthalate layer (6a), said la minated film (6,16) is layered on said thermoformed sheet-like body (1,11) such that the film layer composed of the blend material faces t he reverse face of said thermoformed sheet-like body (1,11), and bond ed to the sheet-like thermoformed body with a small bonding strength to be capable of peeling, and a cut (7,17) is formed in a position su rrounding the opening (5,15) of each recess (3,13) such that the cut (7,17) penetrates the laminated film (6,16) from a face of the lamina ted film (6,16) opposite the sheet-like thermoformed body (1,11) in a thickness direction thereof but does not penetrate the sheet-like th ermoformed body (1,11) in the thickness direction thereof. 1.Emballage coque comprenant: * un corps thermoforme semblable a une feuille (1,11) ayant un certain nombre de saillies (2,12) extrudees a partir d'une surface du corps ; et * un film stratifie (6,16) en materiau resineux synthetique, qui obtur e les ouvertures (5,15) de cavites (3,13) sur le revers du corps th ermoforme semblable a une feuille (1,11) apres que des matieres a emballer ont ete placees dans les cavites (3,13), chaque cavite (3,13) constituant l'interieur de chaque saillie (2,12) destine a recevoi r la matiere a emballer, **caracterise en ce que** ledit film strati fique (6,16) qui obture les ouvertures (5,15) comprend une couche de polyterephthalate d'ethylene (6a,16a) et une couche formant film (6 b, 16c), composee d'un materiau melange fait d'une resine copolymere d'ethylene / acetate de vinyle et d'une resine olefine et stratifie s ur ladite couche de polyterephthalate d'ethylene (6a). **en ce que** ledit film stratifie (6,16) est applique sur ledit corps thermoforme semblable a une feuille (1,11) de sorte que la couche formant film c omposee du materi au melange se trouve face au revers dudit corps ther moforme semblable a une feuille (1,11), et est colle au corps thermo forme semblable a une feuille au moyen d'une faible contrainte d'adhe rence afin de pouvoir etre decolle, et **en ce qu'**une entaille (7,17) est constituee autour de l'ouverture (5,15) de chaque cavite (3,13) de sorte que l'entaille (7,17) penetre dans le film stratifie (6,16) a partir d'une face du film stratifie (6,16) opposee au

corps thermoforme semblable à une feuille (1, 11) dans le sens de l'épaisseur du film mais ne traverse pas le corps thermoforme semblable à une feuille (1, 11) dans le sens de l'épaisseur de ce dernier.

Japan

Publication Number: JP 2002225930 A (Update 200268 E)

Publication Date: 20020814

PACKAGE

Assignee: DAIWA GRAVURE CO LTD (DAIW-N)

Inventor: SHIBATA YUKIHIKO

Language: JA (5 pages)

Application: JP 200120859 A 20010130 (Local application)

Original IPC: B65D-75/34(A) A61J-1/03(B) B65D-83/04(B)

Current IPC: A61J-1/00(R,A,I,M,JP,20060101,20051220,C,L) A61J-1/03(R,I,M,JP,20060101,20051220,A,L) B65D-75/28(R,I,M,EP,20060101,20051008,C) B65D-75/34(R,I,M,EP,20060101,20051008,A) B65D-83/04(R,I, M,JP,20060101,20051220,A,F) B65D-83/04(R,I,M,JP,20060101,20051220,C,F)

Current ECLA class: B65D-75/32D3JP 3935677 B2 (Update 200742 E)

Publication Date: 20070627

Package body

Assignee: DAIWA GRAVURE KK (DAIW-N)

Language: JA (7 pages)

Application: JP 200120859 A 20010130 (Local application)

Related Publication: JP 2002225930 A (Previously issued patent)

Original IPC: A61J-1/00(B,I,M,98,20060101,20070607,C) A61J-1/03(B,I,H,JP,20060101,20070607,A,L) B65D-75/28(B,I,M,98,20060101,20070607,C) B65D-75/34(B,I,H,JP,20060101,20070607,A,F) B65D-83/04(B,I,H, JP,20060101,20070607,A,L) B65D-83/04(B,I,M,98,20060101,20070607,C)

Current IPC: A61J-1/00(B,I,H,JP,20060101,20070607,C,L) A61J-1/03(B,I,H,JP,20060101,20070607,A,L) B65D-75/28(B,I,H,JP,20060101,20070607,C,F) B65D-75/34(B,I,H,JP,20060101,20070607,A,F) B65D-83/04(R,I,M, JP,20060101,20051220,A,F) B65D-83/04(R,I,M,JP,20060101,20051220,C,F)

Current ECLA class: B65D-75/32D3

Original Abstract: This invention relates to the package body for packaging a medicinal tablet, the granular confectionery (For example, a soda, chocolate, etc.), etc. As mentioned above, according to this invention, it joins so that this laminated film can be peeled off by small joining force with respect to a sheet-like compact|molding|casting using the laminated film which consists of synthetic-resin material at the back surface of the sheet-like compact|molding|casting which consists of synthetic-resin material. Although a laminated film is penetrated in the thickness direction from the back surface side of a laminated film in the position surrounding the opening of each concave part which stores to-be-stored objects, such as a tablet, to said laminated film, incision is formed so that a sheet-like compact|molding|casting may not be penetrated in the thickness direction. By joining to the outer-periphery vicinity part of the opening of a sheet-like compact|molding|casting, the outer periphery of the laminated-film part surrounded by this incisionBy pushing the swelling part of the surface side of a sheet-like compact|molding|casting with a finger, and pressing the to-be-stored object inside a concave part on the laminated-film part side surrounded by said incision, the junction part of the outer periphery of a laminated-film part and the outer-periphery vicinity part of the opening of a sheet-like compact|molding|casting which were surrounded by the force by incision peel off. As a result, an opening can open and a to-be-stored object can be picked out removed from a concave part. Thus, this invention is a laminated film which the film joined to the back surface of a sheet-like compact|molding|casting turns into from the synthetic-resin material instead of an aluminum foil. Therefore It can make it possible to perform the classification discharge|emission processing by a consumer easily.

Claim: Many swelling parts which are formed in the sheet-like compact|molding|casting which consists of synthetic-resin material of thermoforming, and protrude in surface side are provided. It joins so that this laminated film can be peeled off by small joining force with respect to a sheet-like compact|molding|casting using the laminated film which consists of synthetic-resin material so that the opening of the concave part on the back surface of a sheet-like compact|molding|casting may be closed in the state which put the to-be-stored object into the concave part inside many of each swelling parts. Although a laminated film is penetrated in the thickness direction from the back surface side of a laminated film in the position surrounding the opening of each said concave part, incision is formed so that a sheet-like compact|molding|casting may not be penetrated in the thickness direction. The outer periphery of the laminated-film part surrounded by this incision is joined to the outer-periphery vicinity part of the opening of a sheet-like compact|molding|casting. The package body characterized by the above-mentioned.

United States

Publication Number: US 20020100709 A1 (Update 200262 E)

Publication Date: 20020801

Blister pack

Assignee: DAIWA GRAVURE CO., LTD. (DAIW-N)

Inventor: Shibata, Yukihiko, Nagoya-shi, JP

Agent: Christopher J. Fildes, Fildes Outland, P.C., Suite 2, 20916 Mack Avenue, Grosse Pointe Woods, MI, US

Language: EN

Application: US 200257174 A 20020125 (Local application)

Priority: JP 200120859 A 20010130

Original IPC: B65D-73/00(A)

Current IPC: A61J-1/00(R,A,I,M,JP,20060101,20051220,C,L) A61J-1/03(R,I,M,JP,20060101,20051220,A,L) B65D-75/28(R,I,M,EP,20060101,20051008,C) B65D-75/34(R,I,M,EP,20060101,20051008,A) B65D-83/04(R,I, M,JP,20060101,20051220,A,F) B65D-83/04(R,I,M,JP,20060101,20051220,C,F)

Current ECLA class: B65D-75/32D3

Current US Class (main): 206-469000

Original US Class (main): 206469

Original Abstract: An object of the present invention is to facilitate separate waste disposal of blister packs by consumers. To achieve this object, a blister pack has been provided, which comprises a sheet-like thermoformed body having a number of protrusions extruded from a surface of the body; and a laminated film made from a synthetic resinous material, which closes openings of recesses on a reverse face of the thermoformed body after to-be-packaged matters have been placed in the recesses, each recess forming an interior of each protrusion, wherein the laminated film is bonded to the thermoformed body with a small bonding strength to be capable of peeling, and a cut is formed in a position surrounding the opening of each recess such that the cut penetrates the laminated film in its thickness direction from its reverse face but does not penetrate the body in its thickness direction.

Claim: What is claimed is: 1.**1**. A blister pack comprising: * a thermoformed sheet-like body having a number of protrusions extruded from a surface of the body; and * a laminated film made from a synthetic resinous material, which closes openings of recesses on a reverse face of the sheet-like thermoformed body after to-be-packaged matters have been placed in the recesses, each recess forming an interior of each protrusion, * wherein the laminated film is bonded to the sheet-like thermoformed body with a small bonding strength to be capable of peeling, and a cut is formed in a position surrounding the opening of each recess such that the cut penetrates the laminated film from a reverse face thereof in a thickness direction thereof but does not penetrate the sheet-like thermoformed body in the thickness direction thereof.US 6776285 B2 (Update 200454 E)

Publication Date: 20040817

Blister pack

Assignee: Daiwa Gravure Co., Ltd., Aichi, JP

Inventor: Shibata, Yukihiko , Nagoya, JP

Agent: Fildes Outland, P.C., US

Language: EN

Application: US 200257174 A 20020125 (Local application)

Priority: JP 200120859 A 20010130

Original IPC: B65D-83/04(A)

Current IPC: B65D-83/04(A)

Current ECLA class: B65D-75/32D3

Current US Class (main): 206-469000

Current US Class (secondary): 206-531000

Original US Class (main): 206469

Original US Class (secondary): 206531

Original Abstract: An object of the present invention is to facilitate separate waste disposal of blister packs by consumers. To achieve this object, a blister pack has been provided, which comprises a sheet-like thermoformed body having a number of protrusions extruded from a surface of the body; and a laminated film made from a synthetic resinous material, which closes openings of recesses on a reverse face of the thermoformed body after to-be-packaged matters have been placed in the recesses, each recess forming an interior of each protrusion, wherein the laminated film is bonded to the thermoformed body with a small bonding strength to be capable of peeling, and a cut is formed in a position surrounding the opening of each recess such that the cut penetrates the laminated film in its thickness direction from its reverse face but does not penetrate the body in its thickness direction.

Claim: What is claimed is: 1.1. A blister pack comprising: * a thermoformed sheet-like body having a number of protrusions extruded from a surface of the body; and * a laminated film made from a synthetic resinous material, which closes openings of recesses on a reverse face of the sheet-like thermoformed body after to-be-packaged matters have been placed in the recesses, each recess forming an interior of each protrusion, wherein the laminated film which closes the openings comprises a polyethylene terephthalate layer, and a film layer composed of a blend material consisting of an ethylene/vinyl acetate copolymer resin and an olefin resin and laminated to said polyethylene terephthalate layer, * said laminated film is layered on said thermoformed sheet-like body such that the film layer composed of the blend material faces the reverse face of said thermoformed sheet-like body, and bonded to the sheet-like thermoformed body with a small bonding strength to be capable of peeling, and * a cut is formed in a position surrounding the opening of each recess such that the cut penetrates the laminated film from a face of the laminated film opposite the sheet-like thermoformed body in a thickness direction thereof but does not penetrate the sheet-like thermoformed body in the thickness direction thereof.

Derwent World Patents Index

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